#### **LION Enviro-Geotech**

129 N. Cloverdale Blvd, # 7 Cloverdale, CA. 95425 (707) 894-9024 office (707) 894-7463 fax CONSULTING ENGINEERING GEOLOGY Environmental Investigation & Remediation Geologic & Geotechnical Services Construction Observation & Materials Testing

January 18, 2006 Project No. 1097.01.01

Ms. Colleen Hunt North Coast Regional Water Quality Control Board 5550 Skylane Boulevard, Suite A Santa Rosa, California 95403

Subject:

Groundwater Monitoring Report, Q4 2005

D&G Automotive, 615 Talmage Road, Ukiah, California CRWQCB Case No. 1TMC434, USTCF Claim No. 015086

Dear Ms. Stone:

This report presents the results of Groundwater Monitoring conducted during Q4 of 2005 at D&G Automotive, 615 Talmage Road, Ukiah, California (Vicinity Map, Plate 1). The groundwater monitoring and sampling was performed on December 23, 2005 by LION Enviro-Geotech. The groundwater monitoring is required by the California Regional Water Quality Control Board, North Coast Region (CRWQCB). The site is identified as CRWQCB Case No. 1TMC434 and USTCF Claim No. 015086.

#### **Background**

A leaking waste-oil UST was removed from the site in 1999. Subsequent investigation of waste-oil in soil and groundwater in 2000 discovered leakage from abandoned in-place gasoline USTs. In 2000, gasoline and waste-oil contaminated soil was excavated in the area of the removed waste-oil UST and gasoline USTs. Approximately 1,400 cubic yards of impacted soil was removed and disposed offsite. In addition, approximately 42,000 gallons of gasoline and waste-oil contaminated water was removed from the excavation, temporarily stored onsite in Baker Tanks, and subsequently hauled and recycled at an offsite facility by Chico Drain Oil. Unfortunately, due to physical limitations at the site, it was not possible to remove all petroleum-impacted soils from the property.

In early 2002, the CRWQCB approved the installation of 27 borings at the site. During December of 2002, a comprehensive set of soil and groundwater samples were obtained from the boreholes. These samples have documented the elimination of impacted soils from the waste-oil UST release, and the removal of the vast majority of the impacted soils from the gasoline USTs release.

An area of gasoline impacted soil remains in undisturbed native soils at the northeast and east edge of the gasoline USTs excavation and extends generally northeast to east towards the City of Ukiah Trunk Sewer Main. Within this area is a relatively shallow zone of highly impacted silty and clayey sands from about 1 feet to about 6 feet deep, with levels of TPH as gasoline up to 15,000 parts per million (ppm). Within this area is a relatively deep zone from about 12 to 14 feet deep, with slightly impacted soil within moderately permeable sand and silt strata bound in the capillary fringe of the seasonal low groundwater table estimated at 14 to 15 feet below grade.

The extent of gasoline impacted groundwater is generally defined by the existing array of borings and appears to be confined to the vicinity of the remaining gasoline impacted soils in native soils located northeast to east of the gasoline USTs excavation. A small area of gasoline contaminated groundwater was previously detected between the onsite domestic well, the waste-oil UST excavation, and the southwest corner of the gasoline USTs excavation, with concentrations of MTBE and 1,2-DCE detected at 36 ppb and 12 ppb, respectively, but has not been detected during the past Quarterly Groundwater Monitoring at well MW-2.

In a June 18, 2003 letter, Mr. Dan Warner of CRWQCB required that a Work Plan be prepared for installation of monitoring wells. The CRWQCB concurred with recommendations to install groundwater monitoring wells to assess groundwater flow direction on a monthly basis and concentrations of contaminants of concern on a quarterly basis. CRWQCB recommended sampling monitoring wells for TPH as diesel, TPH as gasoline, BTEX, VOCs, and fuel oxygenates.

LION prepared a Workplan for Well Installation and Groundwater Monitoring dated September 26, 2003, which proposed a scope of work to assess the lateral and vertical extent of petroleum hydrocarbon constituents in soil and groundwater around the waste-oil and gasoline USTs excavation area to evaluate groundwater flow direction and concentrations of requested analytes in groundwater at the site. The CRWQCB concurred with the proposed scope with comments in a CRWQCB letter dated October 30, 2003 from Mr. Dan Warner.

The Monitoring Well Installation and Groundwater Monitoring conducted during June 7 through 10, 2004, generated an additional set of soil and groundwater samples collected from six boreholes for monitoring wells MW-1 through MW-6 and a water sample collected from domestic well DW-D&G (Site Plan, Plate 2).

The soil samples collected from the soil borings for wells MW-1 through MW-6 did not contain the requested analytes at or above the laboratory reporting limits, except for BTEX constituents just above detection level at 10' and 15' in well MW-2. Monitoring well MW-3 contained gasoline constituents including benzene up to 5,000 ppb and TPH as gasoline up to 8,100 ppm.

The initial groundwater samples collected from the monitoring wells MW-1 through MW-6 did not contain the requested analytes at or above the laboratory reporting limits, except for MTBE and EDC at 2.0 ppb, just above detection levels in well MW-5. Monitoring well MW-3 contained gasoline constituents including benzene at 1.4 ppb, EDC at 2.8 ppb, and TPH as gasoline at 190 ppb. The groundwater sample collected from the onsite domestic well DW-D&G did not contain the requested analytes at or above the laboratory reporting limits.

The shallow groundwater flow direction on June 10, 2004 was generally east to southeast at wells MW-3 through MW-6, and towards domestic well DW-D&G in the vicinity of wells MW-1 and MW-2. The calculated gradients range from level between wells MW-3, MW-5, and MW-6, to 0.020 foot per foot between wells MW-1 and MW-2.

Based on the results of the past investigations and remedial activities, LION Enviro-Geotech recommended: to continue groundwater monitoring and reporting at monitoring wells MW-1 through MW-6; to continue groundwater monitoring and reporting at domestic Well DW-D&G and include DW-Ramada Inn on a one time basis for comparison of results. Analyze the domestic well samples using the EPA 500 series for drinking water; evaluate cleanup options for the residual soil and groundwater contamination around the vicinity of MW-3.

In a letter dated December 21, 2005, based upon discussion and recommendations during a November 21, 2005 teleconference with Mr. Will Oswald during a meeting with Colleen Hunt, Beth Lamb, and myself at the CRWQCB office, the CRWQCB indicated that quarterly monitoring be reduced down to collecting samples from MW-3 only.

#### Water Level Measurements in Monitoring Wells

Groundwater levels in wells MW-1 through MW-6 were measured on October 23, and in wells MW-1 through MW-3 on December 23, 2005. The groundwater levels were measured by Tom Lion using a Solinst Water Level Indicator.

The depth to water was measured relative to the top-of-casing previously surveyed by DobleThomas & Associates of Cloverdale. The monitoring well Top-of-Casing Elevation, Depth to Groundwater and the Groundwater Elevation for wells MW-1 through MW6 are presented in Table 1, Cumulative Groundwater Elevation Data, Q4 2005.

### Revised Site Map and Geotracker Data for Monitoring Well MW-2

Previous monitoring at MW-2 indicated an apparent lowering of the water table near Domestic Well DW-D&G. LION surveyed the relative elevations of the top-of-casings at MW-1, MW-2, MW-5, and MW-6 and determined that there was an error in the reported elevation at MW-2 by approximately 1 foot lower than it should be. As this could explain the apparent anomaly, LION requested DobleThomas check their field notes for the monitoring well elevation at MW-2. DobleThomas noted that there was an error in their reported top of casing elevation, corrected the elevation at MW-2, and transmitted a Revised Site Map, and Revised Geotracker data for the Z value at MW-2.

#### Groundwater Flow Direction and Gradient

The Groundwater Elevation and Gradient Maps for wells MW-1 through MW-6 for October 23, and wells MW-1 through MW-3 for December 23, 2005 using the revised elevation of the top-of-casing at MW-2 are presented as Plates 3 and 4.

The groundwater elevation contours were interpolated within a computer contouring program using the water level measurements taken in wells MW-1 through MW-6 on October 23, and wells MW-1 through MW-3 for December 23, 2005. These water level elevation measurements are shown on Table 1, Cumulative Groundwater Elevation Data, Q4 2005, and potentiometric surface contours are shown on Plates 3 and 4, Groundwater Elevation Contour Maps dated 10/23/05, and 12/23/05, respectively.

The apparent shallow groundwater flow direction on October 23 was generally south from well MW-1 towards well MW-2, and generally east from well MW-3 and MW-5 towards the City of Ukiah Main Trunk Sewer Line adjacent to well MW-4 indicating a likely influence in flow direction due to the Sewer Line and/or trench backfill. The apparent shallow groundwater flow direction on December 23, 2005 was south from well MW-1 towards well MW-2.

The calculated gradients on October 23, 2005 ranged from approximately 0.004 feet/foot from MW-1 towards MW-2 and approximately 0.010 to 0.005 feet/foot from MW-3 and MW-5 towards the City of Ukiah Main Trunk Sewer Line and / or trench backfill.

The calculated gradient on December 23, 2005 was 0.004 feet/foot from MW-1 towards MW-2.

#### Groundwater Sampling in Monitoring Wells

Prior to sampling by LION on December 23, 2005 well MW-3 was purged of approximately 3 well volumes of ground water by bailing and pumping at a relatively steady, low rate, and the indicator parameters pH, temperature, and conductivity of the purged water had stabilized. The groundwater sampling form is presented in Appendix A.

The water samples were immediately labeled, placed in a cooler with ice, and was transported with chain-of-custody documentation to a refrigerator at LION Enviro-Geotech, which is kept with blue ice, pending pickup by Analytical Sciences of Petaluma, California on December 28, 2005 for the chemical analysis as requested on the chain-of-custody documentation in Appendix B, for the requested analytes of Total Petroleum Hydrocarbons as gasoline (TPH G), TPH as diesel (TPH D) and TPH as motor oil (TPH MO), and full list of EPA 8260 compounds including volatile hydrocarbons and oxygenated gasoline additives (EPA 8260 full list).

#### **Groundwater Sampling from Domestic Well DW-D&G**

No sampling was conducted in the on-site domestic well DW-D&G per previous recommendations of the CRWQCB.

#### Analytical Results of Groundwater Samples from Monitoring Well MW-3

None of the requested analytes, TPH G, TPH D, TPH MO or EPA 8260 full list were detected in the groundwater samples collected from well MW-3 on December 23, 2005 at or above the RDLs as indicated in Appendix B, Analytical Sciences Laboratory Report dated January 9, 2006, and as tabulated in Cumulative Groundwater Analytical Results, Q4 2005, Table 2, except for the EPA 8260 compounds described below.

The sample from MW-3 contained low concentrations of gasoline related EPA 8260 compounds, including Benzene at 2.0 ug/L and 1,2-dichlororethane (EDC) at 2.2 ug/L. The State of California Department of Toxics and Substance Control (DTSC) Maximum Contaminant Level (MCL) for Drinking Water for the known carcinogen Benzene is 1 ug/L. The MCL for EDC is 5 ug/L.

### **Analytical Results of Groundwater Samples from Domestic Wells**

No domestic well samples were collected and analyzed during Q4 2005.

#### **Schedule for Subsequent Monitoring Activities**

The Q1 2006 Groundwater Monitoring Report will be presented during April of 2006, following the monthly water level measurements in MW-1 through MW-6, and the quarterly sampling at MW-3 to be conducted during March of 2006.

#### Conclusions

1. EDC and Benzene were detected in the groundwater sample collected at monitoring well MW-3 on December 23, 2005, at 2.2 ug/L and 2.0 ug/L, respectively, just above laboratory reporting limits.

#### Recommendations

As specified in the December 21, 2005 letter from Ms. Colleen Hunt of the California Water Quality Control Board, North Coast Region, we recommend the following:

- 1. All monitoring wells, MW-1 through MW-6 will continue to be checked for depth to water measurements to determine groundwater flow direction.
- Quarterly Groundwater Sampling and reporting of Monitoring Wells MW-3 for TPH as gasoline, TPH as diesel, BTEX, and Fuel Oxygenates using EPA Method 8260 with all peaks reported.
- Continue Geotracker data submittal as required by the State of California Water Resource Control Board.

#### Closure

We trust this is the information you require at this time. If you have any questions regarding this Q4 2005 Groundwater Monitoring Report, please contact Tom Lion at (707) 894-9024.

**CEG 1888** 

Sincerely,

Thomas E. Lion, RG 5491, CEG 1888

Principal Engineering Geologist

LION Enviro-Geotech

#### Attachments:

Table 1	Cumulative Groundwater Elevation Data, Q4 2005
Table 2	Cumulative Groundwater Analytical Results, Q4 2005

Plate 1 Vicinity Map Plate 2 Site Plan

Plate 3 Groundwater Elevation Contour Map, 10/23/2005
Plate 4 Groundwater Elevation Contour Map, 12/23/2005

Appendix A Groundwater Sampling Form, 12/23/05

Appendix B Laboratory Report dated 1/9/2006, Lab Project #5122806

CRWQCB Letter dated December 21, 2005

# **DISTRIBUTION LIST**

## Groundwater Monitoring Report, Q4 2005 D&G Automotive, Ukiah, California Dated January 18, 2006

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Mr. Jeff Delgado State Water Resources Control Board Division of Clean Water Programs UST Cleanup Fund Program P.O. Box 944212 Sacramento, California 94244-2120	1 copy
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# **TABLES**

# TABLE 1 Cumulative Groundwater Elevation Data, Q4 2005 D&G Automotive 615 Talmage Road

Well	Measurement	Ukiah, California Top of Casing	Depth to	Groundwater
ID	Date	Elevation	Groundwater	Elevation
		(Feet, NAVD 1988)	(Feet)	(Feet)
/W-1	7/21/2004	587.15	13.11	574.04
/W-1 /W-1	8/17/2004 9/23/2004	587.15 587.15	14.51	572.64
MW-1	10/29/2004	587.15	15.78 13.96	571.37 573.19
/W-1	11/24/2004	587.15	13.24	573.91
/W-1	12/29/2004	587.15	6.31	580.84
/W-1 //W-1	1/28/2005 2/28/2005	587.15 587.15	6.02	581.13
MW-1	3/16/2005	587.15	6.16 6.09	580.99 581.06
/W-1	4/19/2005	587.15	5.99	581.16
MW-1	5/24/2005	587.15	5.14	582.01
/W-1 //W-1	6/15/2005 7/19/2005	587.15 587.15	6.95 9.07	580.20 578.08
/W-1	8/29/2005	587.15	11.19	575.96
/W-1	9/29/2005	587.15	13.30	573,85
MW-1 MW-1	10/23/2005 12/23/2005	587.15 587.15	12.79 6.31	574.36 580.84
/W-2	7/21/2004	586.63	12.83	573.80
/W-2	8/17/2004	586.63	14.22	572.41
/W-2	9/23/2004	586.63	15.47	571.16
MW-2	10/29/2004	586.63	13.66	572.97
MW-2 MW-2	11/24/2004	586.63 586.63	12.93 6.02	573.70 580.61
MW-2	1/28/2005	586.63	5.73	580.90
MW-2	2/28/2005	586.63	5.89	580.74
MW-2 MW-2	3/16/2005 4/19/2005	586.63 586.63	5.81	580.82
MW-2	5/24/2005	586.63	5.70 4.83	580.93 581.80
MW-2	6/15/2005	586.63	6.69	579.94
MW-2	7/19/2005	586.63	8.79	577.84
MW-2 MW-2	8/29/2005 9/29/2005	586.63 586.63	10.88	575.75 573.63
MW-2	10/23/2005	586.63	12.51	573.63
MW-2	12/23/2005	586.63	6.00	580.63
MW-3	7/21/2004	586.10	12.20	573.90
MW-3 MW-3	8/17/2004 9/23/2004	586.10 586.10	13.62	572.48 571.25
MW-3	10/29/2004	586.10	14.85 13.06	571.25 573.04
W-3	11/24/2004	586.10	12.34	573.76
MW-3	12/29/2004	586.10	5.53	580.57
MW-3 MW-3	1/28/2005 2/28/2005	586.10 586.10	4.47 4.62	581.63 581.48
MW-3	3/16/2005	586.10	4.55	581.55
MW-3	4/19/2005	586.10	4.44	581.66
MW-3 MW-3	5/24/2005 6/15/2005	586.10	3.41	582.69
MW-3	7/19/2005	586.10 586.10	6.23 8.29	579.87 577.81
MW-3	8/29/2005	586.10	10.36	575.74
MW-3	9/29/2005	586.10	12.40	573.70
MW-3 MW-3	10/23/2005 12/23/2005	586.10 586.10	11.91 5.40	574.19 580.70
MW-4	7/21/2004	584.47	10.91	573.56
MW-4	8/17/2004	584.47	12.34	572.13
MW-4	9/23/2004	584.47	13.54	570.93
MW-4 MW-4	10/29/2004 11/24/2004	584.47 584.47	11.76 11.13	572.71 573.34
MW-4	12/29/2004	584.47	4.39	580.08
MW-4	1/28/2005	584.47	5.32	579.15
MW-4 MW-4	2/28/2005	584.47 584.47	5.46	579.01
MW-4	3/16/2005 4/19/2005	584.47	5.39 5.28	579.08 579.19
MW-4	5/24/2005	584.47	4.39	580.08
MW-4 MW-4	6/15/2005	584.47	5.44	579.03
MW-4	7/19/2005 8/29/2005	584.47 584.47	7.34 9.25	577.13 575.22
MW-4	9/29/2005	584.47	11.14	573.33
MW-4	10/23/2005	584.47	10.54	573.93
MW-5	7/21/2004	584.49	10.62	573.87
MW-5 MW-5	8/17/2004 9/23/2004	584.49 584.49	12.06 13.31	572.43 571.18
MW-5	10/29/2004	584.49	11.55	571.18
MW-5_	11/24/2004	584.49	10.83	573.66
MW-5	12/29/2004	584.49	4.39	580.10
MW-5 MW-5	1/28/2005 2/28/2005	584.49 584.49	3.79 3.93	580.70 580.56
MW-5	3/16/2005	584.49	3.86	580.63
MW-5	4/19/2005	584.49	3.76	580.73
MW-5 MW-5	5/24/2005 6/15/2005	584.49	2.82	581.67
MW-5	7/19/2005	584.49 584.49	4.69 6.74	579.80 577.75
MW-5	8/29/2005	584.49	8.78	575.71
MW-5	9/29/2005	584.49	10.79	573.70
MW-5	10/23/2005	584.49	10.31 .	574.18
MW-6 MW-6	7/21/2004 8/17/2004	584.35 584.35	10.61	573.74 572.26
MW-6	9/23/2004	584.35 584.35	12.09 13.31	572.26 571.04
MW-6	10/29/2004	584.35	11.56	572.79
MW-6	11/24/2004	584.35	10.80	573.55
MW-6 MW-6	1/28/2004	584.35 584.35	4.15 4.00	580.20 580.35
MW-6	2/28/2005	584.35	4.00	580.35 580.20
MW-6	3/16/2005	584.35	4.09	580.26
MW-6	4/19/2005	584.35	4.00	580,35
MW-6	5/24/2005 6/15/2005	584.35 584.35	3.04 4.88	581.31 579.47
MW-6	7/19/2005	584.35	6.86	577.49
MW-6	8/29/2005	584.35	8.85	575.50
MW-6	9/29/2005	584.35	10.84	573.51

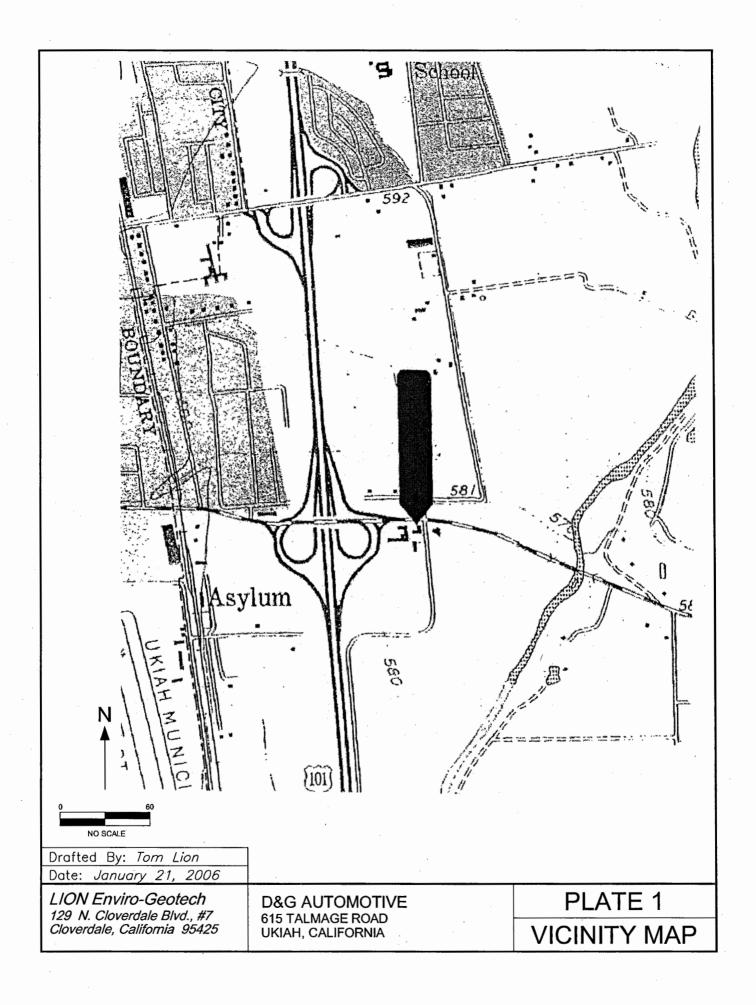
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS, MONITORING WELLS & DOMESTIC WELLS, Q4 2005 **TABLE 2** 

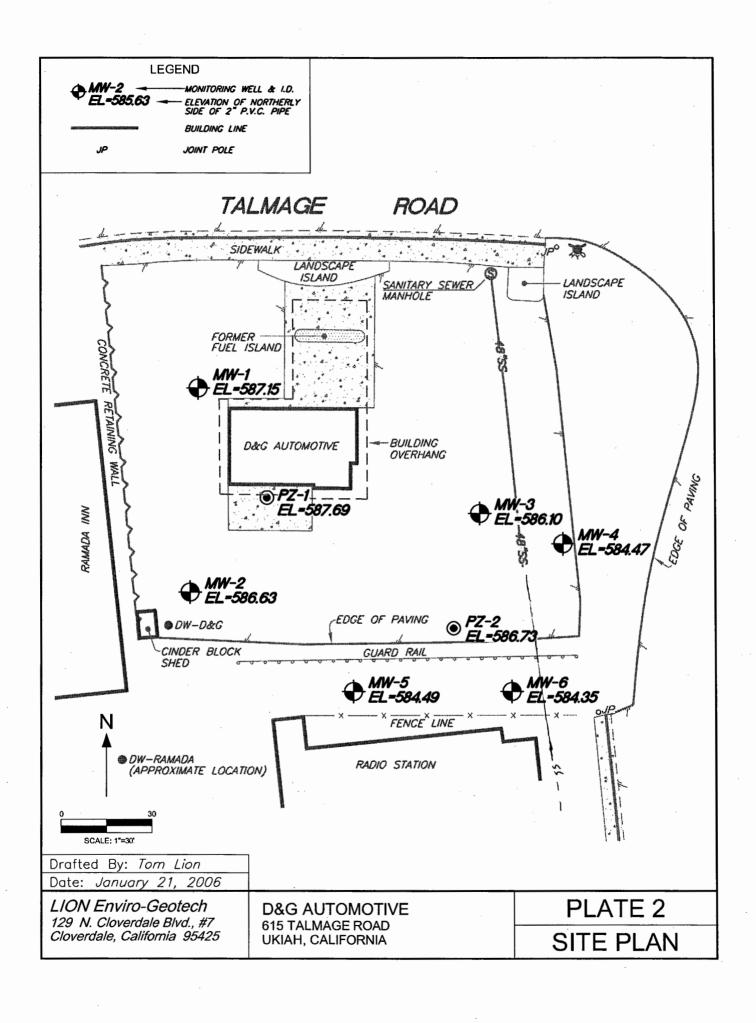
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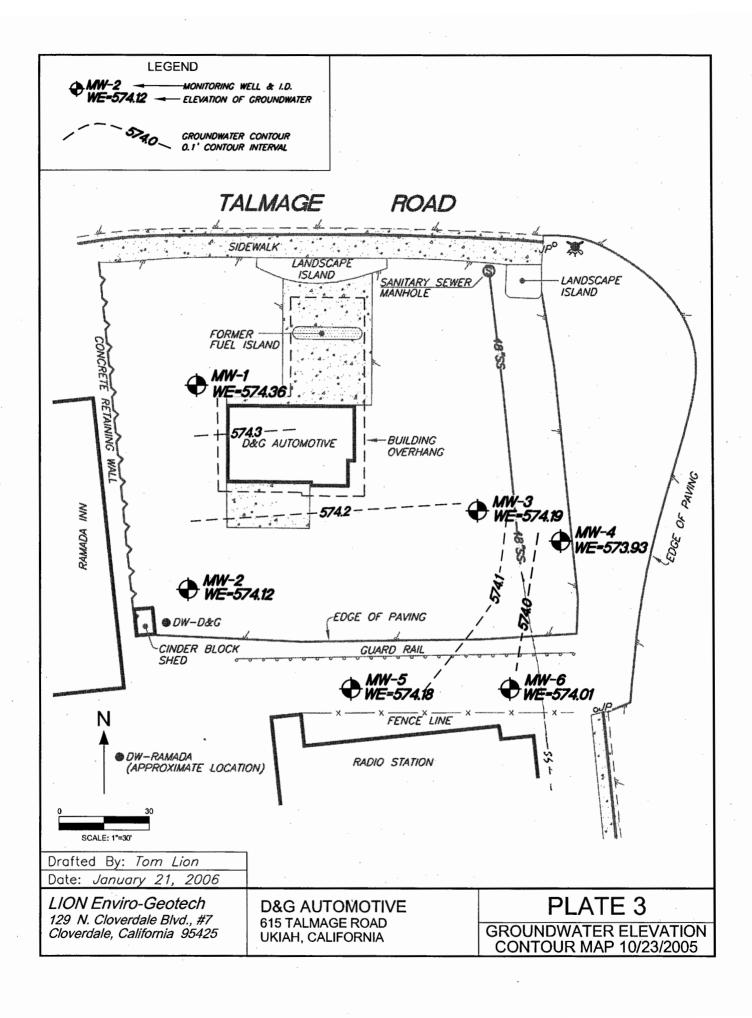
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В	EPA 8260B	µg/L	Q	2	Q	ND	QN	ND	TN	QN	QN	ND	ND	QN	QN	TN	1.4	1.2	5.9	3.3	2.4	QN	QN	QN	QN	ND	Q	Q	Q	ND	QN	Q	9	2	QN	Q	Q	Q	Q	2 2	2	S	2	ND	ND	ON	QN
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Date			6/10/2004	9/23/2004	12/30/2004	3/16/2005	6/15/2005	9/29/2005	12/23/2005	6/10/2004	9/23/2004	12/30/2004	3/16/2005	6/15/2005	9/29/2005	12/23/2005	6/10/2004	9/23/2004	12/30/2004	3/16/2005	6/15/2005	9/29/2005	12/23/2005	6/10/2004	9/23/2004	12/30/2004	3/16/2005	6/15/2005	9/29/2005	6/10/2004	9/23/2004	12/30/2004	3/16/2005	6/15/2005	9/29/2005	6/10/2004	9/23/2004	12/30/2004	3/16/2005	6/15/2005	6/10/2004	9/23/2004	12/30/2004	6/15/2005	6/15/2005	9/29/2005	9/23/2004
Monitoring Well ID			MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-6	MW-6	MW-6	MW-6	9-WW-6	טאיר-אים	DW-D&G	DW-D&G	DW-D&G	DW-D&G	DW-D&G	DW-Ramada

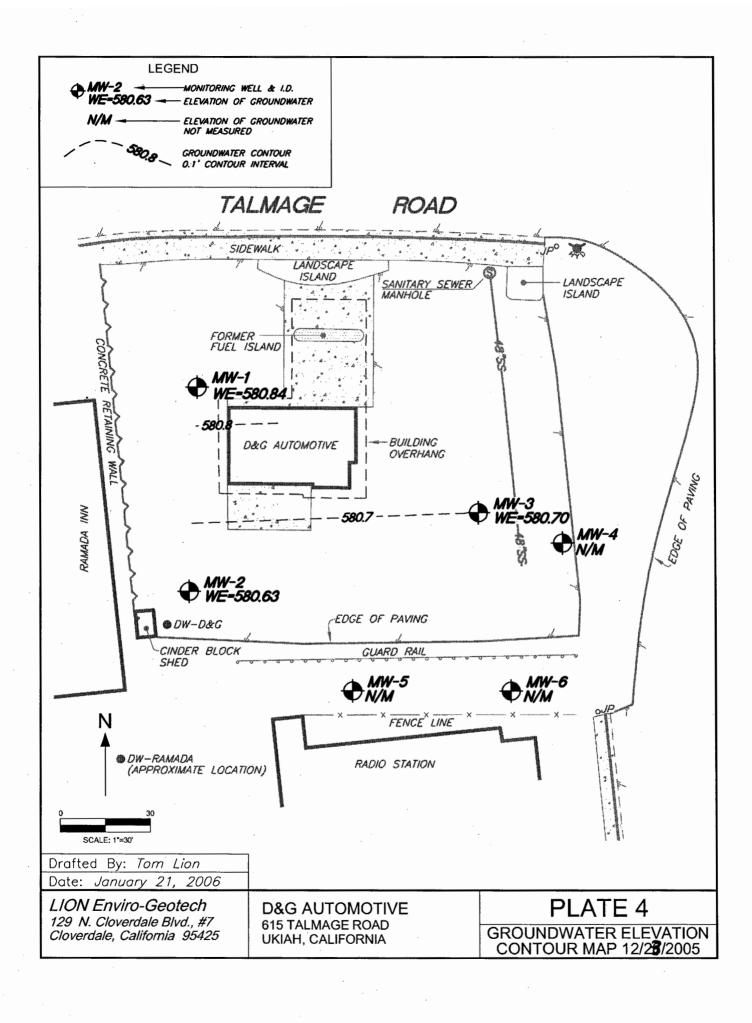
TPH G = Total Petroleum Hydrocarbons quantified as Casoline
TPH D = Total Petroleum Hydrocarbons quantified as Diesel
TPH MO = Total Petroleum Hydrocarbons quantified as Diesel
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TPH MO = Total Petroleum Hydrocarbons Quantified Saloreum Hydrocarbons Quantified Sa

# **PLATES**









# **APPENDIX A**

Groundwater Sampling Field Form

**December 23, 2005** 

# Groundwater Sampling Form, Q4 2005 615 Talmage Road Ukiah, California **D&G Automotive**

Parameter	Units	MW1	MW2	MW3	MW4	MW5	MW6
Top of Casing Elevation	Feet	587.15	585.63	586.1	584.47	584.49	584.35
Depth to Water	Feet	6.31	00.9	5.40			
Elevation to Water	Feet	580.84	579.63	580.70			
Bottom of Casing Elevation	Feet	566.65	565.13	565.6			
Height of Water Column	Feet			15.10			
Volume/Gallons Lineal Feet-2" Diameter Well	Gallons/Ft	:		0.17			
Volume/Gallons Lineal Feet-4" Diameter Well	Gallons/Ft			1			
One Well Volume	Gallons			2.57			
Three Well Volumes	Gallons			7.70			
Start Time of Purge	Minutes			17:40			
Finish Time of Purge	Minutes			17:56			
Total Time of Purge	Minutes			16			
Total Gallons Purged	Gallons			8			
Number Well Volumes Purged				3.1			
Stabilized Water Temperature	Degrees C			13.1			
Stabilized pH				6.86			
Stabilized Conductivity	Sn			245			
Sample Time	Military			18:30			

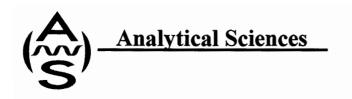
Comments: No free product or sheen in purge water prior to sampling, faint hydrocarbon odors in purge water prior to sampling @ MW-3

12/23/05 Date Sampled: Sampled By: Tom Lion

# **APPENDIX B**

Analytical Sciences Laboratory Report, dated January 9, 2006

Lab Project #5122806



Report Date: January 09, 2006

# **Laboratory Report**

Tom Lion LION Enviro-Geotech 129 N Cloverdale Blvd., Suite 7 Cloverdale, CA 95425

Project Name:

D & G Automotive

1097.01.01

Lab Project:

5122806

This 10 page report of analytical data has been reviewed and approved for release.

Mark A. Valentini, Ph.D.

Laboratory Director



# **TPH Gasoline in Water**

Lab# 5122806-01	Sample ID  MW-3	Compound Name Gasoline		Result (ug/L)	RDL (ug/L) 50	
Date Sampled: Date Received:	12/23/05 12/28/05	Date Analyzed: Method:	01/03/06 EPA 8015	QC	Batch: B000456	



Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5122806-01	MW-3	Dichlorodifluoromethane	ND	1.0
		Chloromethane	ND	1.0
		Vinyl chloride	ND	1.0
		Chloroethane (CE)	ND	1.0
		Bromomethane	ND	1.0
		Trichlotrifluoroethane (Freon113)	ND	1.0
		Trichlorofluoromethane	ND	1.0
		1,1-Dichloroethene (1,1-DCE)	ND	1.0
		Methylene Chloride	ND	1.0
		trans-1,2-Dichloroethene	ND	1.0
		1,1-Dichloroethane (1,1-DCA)	ND	1.0
		cis-1,2-Dichloroethene (c1,2-DCE)	ND	1.0
	•	2,2-Dichloropropane	ND	1.0
		Chloroform (THM1)	ND	1.0
		Bromochloromethane	ND	1.0
		1,1,1-Trichloroethane (TCA)	ND	1.0
		1,2-Dichloroethane (EDC)	2.2	1.0
		1,1-Dichloropropene	ND	1.0
		Carbon Tetrachloride	ND	1.0
		Benzene	2.0	1.0
		Trichloroethene (TCE)	ND	1.0
		1,2-Dichloropropane (DCP)	ND	1.0
		Dibromomethane	ND	1.0
			ND ND	1.0
		Bromodichloromethane (THM2)	ND	1.0
		cis-1,3-Dichloropropene	ND ND	1.0
		Toluene		1.0
		1,1,2-Trichloroethane	ND	1.0
		1,3-Dichloropropane	ND	1.0
		Dibromochloromethane (THM3)	ND	1.0
		Tetrachloroethene (PCE)	ND	
		1,2-Dibromoethane (EDB)	ND	1.0
		Chlorobenzene	ND	1.0
		1,1,1,2-Tetrachloroethane	ND	1.0
		Ethylbenzene	ND	1.0
		m,p-Xylene	ND	1.0
		Styrene	ND	1.0
		o-Xylene	ND	1.0
		Bromoform (THM4)	ND	1.0
		1,1,2,2-Tetrachloroethane	ND	1.0
		Isopropylbenzene	ND	1.0
		1,2,3-Trichloropropane	ND	1.0
		Bromobenzene	ND	1.0
		n-Propyl Benzene	ND	1.0
		2-Chlorotoluene	ND	1.0
		4-Chlorotoluene	ND	1.0
		1,3,5-Trimethylbenzene	ND	1.0
		tert-Butylbenzene	ND	1.0
		1,2,4-Trimethylbenzene	1.5	1.0
		sec-Butylbenzene	ND	1.0

Page 3 of 10



Lab#	Sample ID	Compo	und Name		Result (ug/L)	RDL (ug/L)
5122806-01	MW-3	1,3-Dic	hlorobenzene		ND	1.0
		1,4-Dic	hlorobenzene		ND	1.0
		1,2-Dic	hlorobenzene		ND	1.0
		p-Isopre	opyltoluene		ND	1.0
		n-Butyl	benzene		ND	1.0
		1 <b>,2-D</b> ib	romo-3-chloropro	pane	ND	1.0
		1,2,4-T	richlorobenzene		ND	1.0
		Naphth	alene		1.3	1.0
		Hexach	lorobutadiene		ND	1.0
		1,2,3-T	richlorobenzene		ND	1.0
		Tertiary	Butyl Alcohol (7	ГВА)	ND	25
		Methyl	tert-Butyl Ether (	MTBE)	ND	1.0
	. ,	Di-isop	ropyl Ether (DIPI	Ξ)	ND	1.0
		Ethyl te	ert-Butyl Ether (E'	ТВЕ)	ND	1.0
•		Tert-Ar	nyl Methyl Ether	(TAME)	ND	1.0
. Su	rrogates	Result (ug/L)	% Recove	ery	Acceptance Range	e (%)
Dibromofluoron	nethane	20.6	103		70-130	
Toluene-d8	•	19.5	98		70-130	
4-Bromofluorob	enzene	18.7	94		70-130	
Date Sampled:	12/23/05		Date Analyzed:	12/30/05	QC	Batch: B000449
Date Received:	12/28/05	,	Method:	EPA 8260B		

# **TPH Diesel & Motor Oil in Water**

Lab#	Sample ID	Compound Name		Result (ug/I	L) RDL (ug/L)
5122806-01	MW-3	Diesel Motor Oil		ND ND	50 200
Date Sampled: Date Received:	12/23/05 12/28/05	Date Analyzed: Method:	01/03/06 EPA 8015M		QC Batch: B000452



# **Quality Assurance Report**

# **TPH Gasoline in Water**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B000456 - EPA 5030 GC										
Blank (B000456-BLK1)				Prepared	& Analyz	zed: 01/03	/06_			
Gasoline	ND	50	ug/L							
Matrix Spike (B000456-MS1)	S	ource: 5122704	I-01	Prepared	& Analyz	zed: 01/03	6/06			
Benzene	9.90	0.50	ug/L	10.0	ND	99	70-130			
Toluene	9.98	0.50	ug/L	10.0	ND	100	70-130			
Ethylbenzene	10.3	0.50	ug/L	10.0	ND	103	70-130			
Xylenes	31.1	1.5	ug/L	30.0	ND	104	70-130			
Matrix Spike Dup (B000456-MSD1)	S	Source: 5122704	<b>I-</b> 01	Prepared	& Analyz	zed: 01/03	3/06			
Benzene	9.84	0.50	ug/L	10.0	ND	98	70-130	1	20	
Toluene	9.88	0.50	ug/L	10.0	ND	99	70-130	1	20	
Ethylbenzene	10.1	0.50	ug/L	10.0	ND	101	70-130	2	20	
Xylenes	30.3	1.5	ug/L	30.0	ND	101	70-130	3	20	



Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Note
Batch B000449 - EPA 5030 GC/MS										
Blank (B000449-BLK1)				Prepared	& Analyz	zed: 12/30	/05			
Dichlorodifluoromethane	ND	1.0	ug/L							
Chloromethane	ND	1.0	ug/L							
Vinyl chloride	ND	1.0	ug/L							
Chloroethane (CE)	ND	1.0	ug/L							
Bromomethane	ND	1.0	ug/L							
Trichlotrifluoroethane (Freon113)	ND	1.0	ug/L							
Trichlorofluoromethane	ND	1.0	ug/L							
1,1-Dichloroethene (1,1-DCE)	ND	1.0	ug/L							
Methylene Chloride	ND	1.0	ug/L							
trans-1,2-Dichloroethene	ND	1.0	ug/L							
1,1-Dichloroethane (1,1-DCA)	ND	1.0	ug/L							
cis-1,2-Dichloroethene (c1,2-DCE)	ND	1.0	ug/L							
2,2-Dichloropropane	ND	1.0	ug/L							
Chloroform (THM1)	ND	1.0	ug/L							
Bromochloromethane	ND	1.0	ug/L							
1,1,1-Trichloroethane (TCA)	ND	1.0	ug/L							
1,2-Dichloroethane (EDC)	ND	1.0	ug/L ug/L							
1,1-Dichloropropene	ND	1.0	ug/L							
Carbon Tetrachloride	ND	1.0	ug/L							
Benzene	ND	1.0	ug/L							
Trichloroethene (TCE)	ND	1.0	ug/L ug/L							
1,2-Dichloropropane (DCP)	ND	1.0	ug/L ug/L							
Dibromomethane	ND	1.0	ug/L ug/L							
Bromodichloromethane (THM2)	ND	1.0	ug/L ug/L							
cis-1,3-Dichloropropene	ND	1.0	ug/L ug/L							
Toluene	ND	1.0	_							
	ND	1.0	ug/L							
1,1,2-Trichloroethane 1,3-Dichloropropane	ND	1.0	ug/L							
• •	ND	1.0	ug/L							
Dibromochloromethane (THM3)	ND ND	1.0	ug/L							
Tetrachloroethene (PCE)			ug/L							
1,2-Dibromoethane (EDB)	ND ND	1.0	ug/L							
Chlorobenzene	ND	1.0	ug/L							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L							
Ethylbenzene	ND	1.0	ug/L							
m,p-Xylene	ND	1.0	ug/L							
Styrene	ND	1.0	ug/L							
o-Xylene	ND	1.0	ug/L							
Bromoform (THM4)	ND	1.0	ug/L							
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L							
Isopropylbenzene	ND	1.0	ug/L							
1,2,3-Trichloropropane	ND	1.0	ug/L							
Bromobenzene	ND	1.0	ug/L							
n-Propyl Benzene	ND	1.0	ug/L							



Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B000449 - EPA 5030 GC/MS										
Blank (B000449-BLK1)				Prepared	& Analyz	ed: 12/30	/05			
2-Chlorotoluene	ND	1.0	ug/L							-
4-Chlorotoluene	ND	1.0	ug/L							
1,3,5-Trimethylbenzene	ND	1.0	ug/L							
tert-Butylbenzene	ND	1.0	ug/L				•			
1,2,4-Trimethylbenzene	ND	1.0	ug/L							
sec-Butylbenzene	ND	1.0	ug/L							
1,3-Dichlorobenzene	ND	1.0	ug/L							
1,4-Dichlorobenzene	ND	1.0	ug/L							
1,2-Dichlorobenzene	ND	1.0	ug/L							
p-Isopropyltoluene	ND	1.0	ug/L							
n-Butylbenzene	ND	1.0	ug/L							
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L							
1,2,4-Trichlorobenzene	ND	1.0	ug/L							
Naphthalene	ND	1.0	ug/L							
Hexachlorobutadiene	ND	1.0	ug/L							
1,2,3-Trichlorobenzene	ND	1.0	ug/L							
Tertiary Butyl Alcohol (TBA)	ND	12	ug/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	ug/L							
Di-isopropyl Ether (DIPE)	ND	1.0	ug/L							
Ethyl tert-Butyl Ether (ETBE)	ND	1.0	ug/L							
Tert-Amyl Methyl Ether (TAME)	ND	1.0	ug/L							
Surrogate: Dibromofluoromethane	20.8		ug/L	20.0		104	70-130			
Surrogate: Toluene-d8	19.8		ug/L	20.0		99	70-130			
Surrogate: 4-Bromofluorobenzene	19.6		ug/L	20.0		98	70-130			
Matrix Spike (B000449-MS1)	Se	ource: 5122703	3-01	Prepared	& Analyz	zed: 12/30	0/05			·
1,1-Dichloroethene (1,1-DCE)	23.5	1.0	ug/L	25.0	ND	94	70-130			
Benzene	23.5	1.0	ug/L	25.0	ND	94	70-130			
Trichloroethene (TCE)	23.4	1.0	ug/L	25.0	ND	94	70-130			
Toluene	23.3	1.0	ug/L	25.0	ND	93	70-130			
Chlorobenzene	22.7	1.0	ug/L	25.0	ND	91	70-130	•		
Surrogate: Dibromofluoromethane	20.5		ug/L	20.0		102	70-130			
Surrogate: Toluene-d8	20.0		ug/L	20.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	18.7		ug/L	20.0		94	70-130			



Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B000449 - EPA 5030 GC/MS										
Matrix Spike Dup (B000449-MSD1)	Source: 5122703-01			Prepared & Analyzed: 12/30/05						
1,1-Dichloroethene (1,1-DCE)	22.4	1.0	ug/L	25.0	ND	90	70-130	4	20	
Benzene	22.5	1.0	ug/L	25.0	ND	90	70-130	4	20	
Trichloroethene (TCE)	22.6	1.0	ug/L	25.0	ND	90	70-130	4	20	
Toluene	22.4	1.0	ug/L	25.0	ND	90	70-130	3	20	
Chlorobenzene	22.0	1.0	ug/L	25.0	ND	88	70-130	3	20	
Surrogate: Dibromofluoromethane	20.9		ug/L	20.0		104	70-130			
Surrogate: Toluene-d8	20.1		ug/L	20.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	19.0		ug/L	20.0		95	70-130			



# TPH Diesel & Motor Oil in Water

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B000452 - EPA 3510C											
Blank (B000452-BLK1)	Prepared & Analyzed: 01/03/06										
Diesel	ND	50	ug/L								
Motor Oil	ND	200	ug/L								
LCS (B000452-BS1)	Prepared & Analyzed: 01/03/06										
Diesel	2070	50	ug/L	2740		76	65-135				
LCS Dup (B000452-BSD1)	Prepared & Analyzed: 01/03/06										
Diesel	1990	50	ug/L	2740		73	65-135	4	30		



# **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference



Analytical ociences

P.O. Box 750336, Petaluma, CA 94975-0336 110 Liberty Street, Petaluma, CA 94952 Fax (707) 769-8093 (707) 769-3128

# CHAIN OF CUSTODY

512280G

LAB PROJECT NUMBER:

1200 LAB SAMPLE # 0 GEOTRACKER EDF: X Y D& G A UTEMOTIVE COOLER TEMPERATURE ပွ 5-122BOG Р 10,22,01,0 0 COMMENTS 3150 Pet GLOBAL ID: 200 PAGE TURNAROUND TIME (check one) LION PROJECT NAME: **LION PROJECT NUMBER:** NORMAL 24 Hours **TOTAL LEAD** CAM 17 METALS / S LUFT METALS RECEIVED BY LABORATORY: EPA 8081 / 8141 / 8082 PESTICIDES / PCB'S SM 5520F / EPA 418.1M 5 DAYS SAME DAY 48 Hours MOBILE LAB DOT \ H9RT ANALYSIS HYDROCARBONS EPA 8270 SEMI-VOLATILE CHLORINATED SOLVENTS SOLVENTS SO10 / EPA 8260B COMPANY NAME: OSCUPALD SURVICES TRUST OXYGENATED FUEL ADDITIVES M0528 AGE CONTACT: WILL OSWALD, TRUSTRE SIGNATURES BILLING INFORMATION **EPA 8260B** BTEX & OXYGENATES + PB SCAVENGERS VOLATILE HYDROCARBONS FPA 8260 (FULL LIST) 1000 TIME MOTOR OIL M2108 A93 7001 TPH DIESEL / EPA 8015M<del>8992</del>0 ADDRESS: PHONE#: FAX#: 10 PRESV. YES/NO 3 12/28/6T CONT. MATRIX ADDRESS: 129 N. CLOVERDALE BLVD., #7 3 SAMPLED BY: CLOVERDALE, CA 95425 12/23/8/18:30 TIME COMPANY NAME: LION ENVIRO-GEOTECH **CLIENT INFORMATION** DATE SAMPLED PHONE#: (707) 894-9024 FAX #: (707) 894-7463 CONTACT: TOM LION CLIENT SAMPLE 1..D. MW-3 RELINQUISHED BY: SIGNATURE TEM F 9 က် 4 2 9 7 ø 6



Agency Secretary

# California Regional Water Quality Control Board North Coast Region

**Beverly Wasson, Chairperson** 



Arnold Schwarzenegger Governor

www.waterboards.ca.gov/northcoast
5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403
Phone: (877) 721-9203 (toll free) • Office: (707) 576-2220 • FAX: (707) 523-0135

December 21, 2005

Oswald Survivor's Trust C/o Mr. Will Oswald 1125 North Amphlett Blvd San Mateo, CA 94401

Dear Mr. Oswald:

Subject:

November 21, 2005 Meeting

File:

D&G Automotive, 615 Talmage Road, Ukiah

Case No. 1TMC434

Thank you for taking the time to participate in a meeting via conference call along with myself, Tom Lion, your consultant and Beth Lamb, Regional Water Board staff on November 21, 2005. The purpose of the meeting was to discuss the necessity of excavating remaining contaminated soil as a corrective action measure. The following was discussed:

- Elevated levels of impacted soil appear to be shallow; within the first five feet below ground surface (bgs).
- Based on quarterly groundwater monitoring activities, remaining soil contamination does not appear to be a serious threat to water quality. Therefore, Regional Water Board staff does not concur with the recommendations to conduct additional soil excavation.
- Additional monitoring is needed to confirm the current low levels and decreasing trend.
  As discussed, quarterly monitoring can be reduced down to collecting samples from
  MW-3 only. All monitoring wells should continue to be gauged for depth to water
  measurements to determine groundwater flow direction.
- Additional quarterly monitoring data, along with all previously collected data, will be
  used to determine additional site requirements, including possible no further action. In
  the event elevated levels are reported in MW-3, Regional Water Board staff will reevaluate the need for additional corrective action, including soil excavation.

California Environmental Protection Agency

At this time, a corrective action plan does not need to be submitted. Please continue with quarterly monitoring activities. The 4<sup>th</sup> quarter 2005 monitoring report is due January 15, 2006. If you have any questions, please contact me at (707) 576-2831.

-2-

Sincerely,

Colleen Hunt

**Environmental Scientist** 

12212005\_CHH\_D&G\_meeting.doc

cc:

Mr. Don Wiles, D&G Automotive, 615 Talmage Road, Ukiah, CA 95482

Mr. Tom Lion, LION Enviro-Geotech, 129 North Cloverdale Blvd, #&, Cloverdale, CA

95425

Mendocino County Health Department